

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: FLINTS POND	Lake Area (ha):	19.42
Town: HOLLIS	Maximum depth (m):	2.7
County: Hillsborough	Mean depth (m):	1.5
River Basin: Merrimack	Volume (m ³):	294500
Latitude: 42°44'45" N	Relative depth:	0.6
Longitude: 71°33'00" W	Shore configuration:	1.15
Elevation (ft): 197	Areal water load (m/vr):	6.85
Shore length (m): 1800	Flushing rate (vr ⁻¹):	4.50
Watershed area (ha): 280.0	P retention coeff.:	0.60
% watershed ponded: 0.0	Lake type:	natural

BIOLOGICAL:

6 January 1989

28 June 1988

DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 70%	DINOBRYON 85%
#2	RHIZOSOLENIA 25%	
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		1165.0
CHLOROPHYLL-A (µg/L)		17.39
DOM. ZOOPLANKTON (% TOTAL) #1	SPARSE - NO DOMINANT	DIAPHANOSOMA 31%
#2		NAUPLIUS LARVA 22%
#3		CALANOID COPEPOD 14%
ROTIFERS/LITER	6	49
MICROCRUSTACEA/LITER	20	218
ZOOPLANKTON ABUNDANCE (#/L)	26	267
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		2.1
BOTTOM DISSOLVED OXYGEN (mg/L)	9.8	0.5
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		< 10
#3		10

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None

CHEMICAL:

Lake: FLINTS POND

Town: HOLLIS

	6 January 1989		28 June 1988		
DEPTH (m)	1.0	2.0	1.0		2.0
pH (units)	7.0	6.9	7.6		7.5
A.N.C. (Alkalinity)	35.0		32.8		33.5
NITRATE NITROGEN	0.07	0.06			
TOTAL KJELDAHL NITROGEN	0.78	0.51	0.79		0.81
TOTAL PHOSPHORUS	0.024	0.026	0.026		0.024
CONDUCTIVITY (μ mhos/cm)	178.7	178.2	156.1		157.5
APPARENT COLOR (cpu)	50	50	105		105
MAGNESIUM			2.30		
CALCIUM			14.4		
SODIUM			11.0		
POTASSIUM			0.80		
CHLORIDE	25	25			
SULFATE	8	8			
TN : TP	35	22			
CALCITE SATURATION INDEX			1.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1988

D.O. S.D. PLANT CHL TOTAL CLASS

**	3	6	3	12	Eutro.
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COMMENTS:

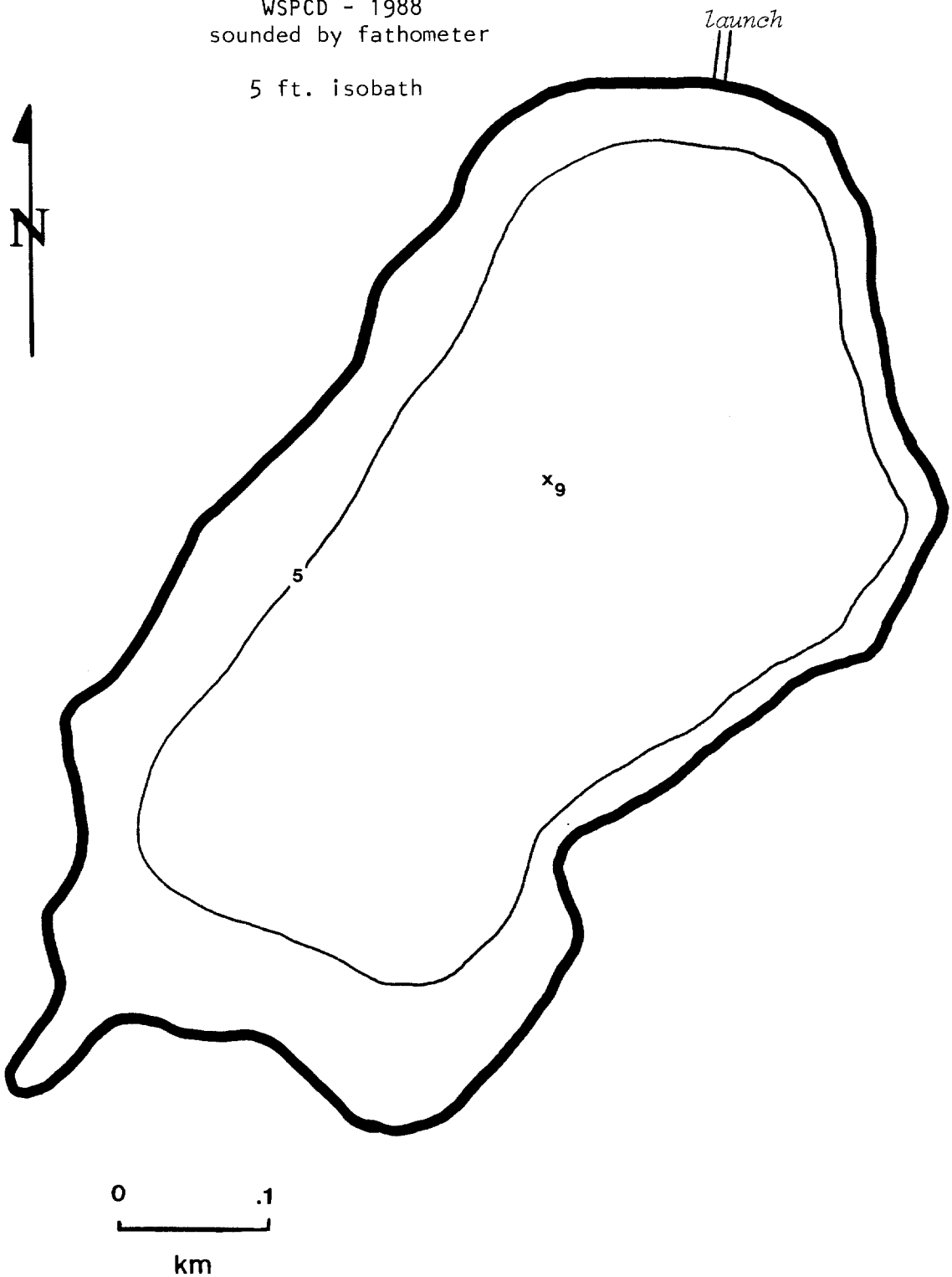
1. This pond was previously surveyed and classified in 1979. There was no significant change in water quality and the trophic classification remained the same.
2. Pond water was a very dark tea color with visual turbidity.
3. Dominant whole-water phytoplankton classes were cryptomonads (45%), greens (25%), and diatoms (20%). Cryptomonas (30%), Cymbella (20%), and tiny green flagellates (15%) were the dominant genera.

FLINTS POND

HOLLIS

Rough Bathymetric Chart
WSPCD - 1988
sounded by fathometer

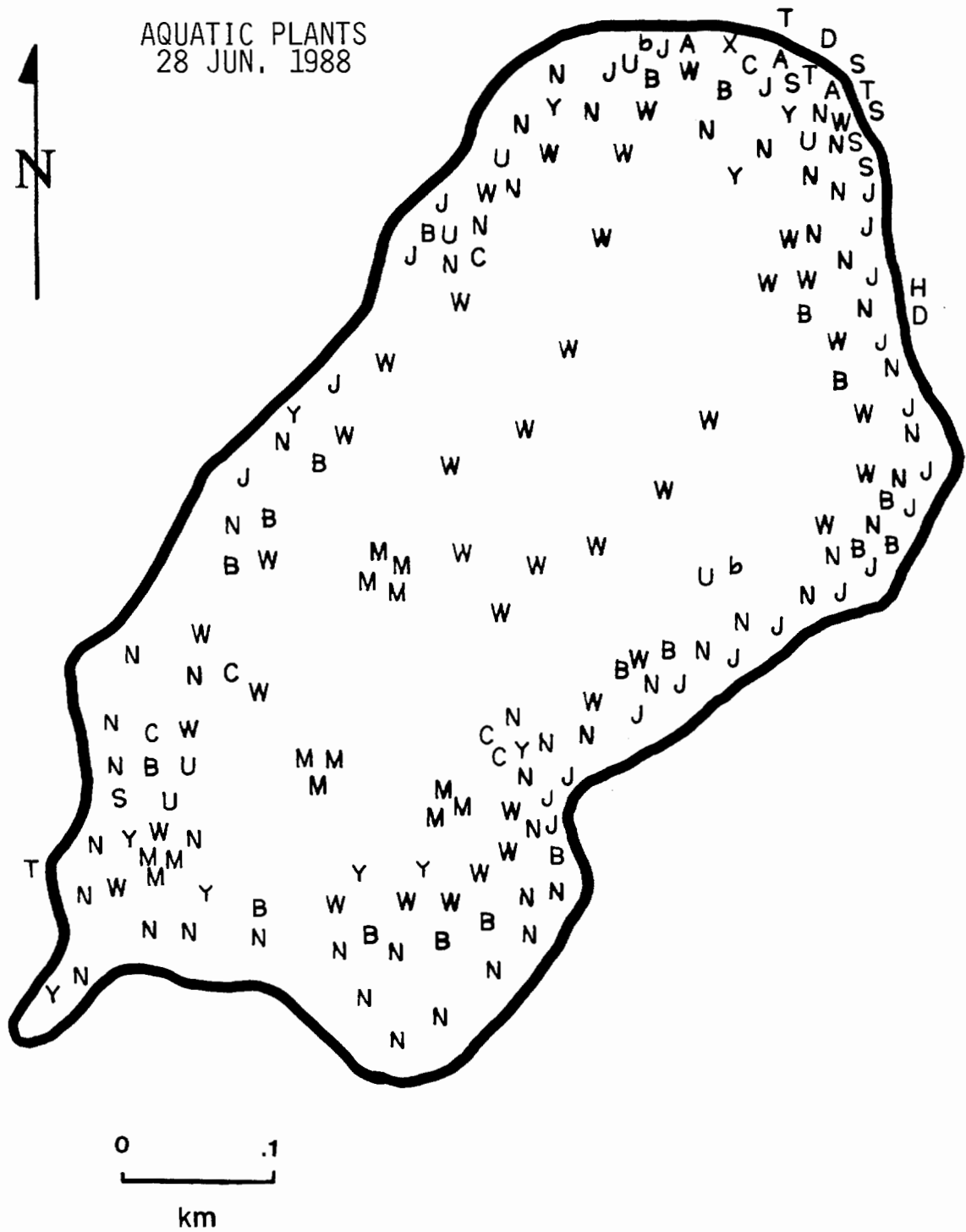
5 ft. isobath



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FLINTS POND

HOLLIS



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